B552 Changes of Landscape Structure in Three Rural Areas with different Land use Regime

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We studied changes of land-use pattern, in relatived to the social and natural environments through time from 1980 to 1997. Study areas are selected in three rural areas: urbanized(URA; Chungju), mountainous (MRA; Mungyung), and typical (TRA; Goesan) rural areas. By means of aerial photograph and a field survey, a map including landscape element pattern was made for each region. Using GIS, the landscape structure was described. Land-use patterns are analyzed area and perimeter of each landscape element. Patch numbers are decreased because changes of machinery-dependent agriculture. Differences among areas in diversity indices obtained from landscape elements were not clear but such indices were the highest in URA and the lowest in MRA. A result of ordination on landscape elements showed such a experience change of three areas by the individualistic way.

B553 The Behavior of Heavy Metal in the *A. vulgaris* and *M. sinensis* grown on the Serpentine Soils, South Korea.

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This study has been done to investigate for the behavior of heavy metal in top soil and plants(*M. sinensis* and *A. vulgaris*) from the serpentine area(Kwangcheon, Hongseong, Baekdong, Yoogoo, Andong and Ulsan area), South Korea. In top soils, nickel did not show correlation with any other elements, while cobalt showed a positive relationship with manganese and iron, respectively. In the *A. vulgaris* and *M. sinensis*, nickel showed high significant positive relationship with cobalt, chromium, zinc and iron, respectively, cobalt was positive relationship with chromium, zinc and iron, respectively, whereas chromium concentration showed a positive relationship with iron. Nickel, chromium and cobalt concentration of the *A. vulgaris* grown on serpentine soils were 28-390ppm, 53-484ppm and 7.7-45ppm, respectively. Nickel, chromium and cobalt concentration of the *A. vulgaris* grown on serpentine soils were 87-510ppm, 81-745ppm and 3.8-44ppm, respectively. Nickel-iron, nickel-cobalt and cobalt-iron concentration of *M. sinensis* growing on serpentine soils showed high significant relationship. The correlation coefficent was higher in above-ground part than root. In the comparisons between top soils and plants, the top soils were higher than the plants. The heavy metal concentration of top soils from serpentine area showed similar value among different sample localities. The heavy metal concentration in the plants had no relationship with those of top soils except molybdenium. The pH of serpentine soil was high, 7.02-9.55.